

**PRIMORDIAL GERM CELL-BASED GERM LINE PRODUCTION OF
BIRDS**

ABSTRACT

5 The invention features an isolated avian gonadal cell, e.g., an ovarian cell or a testes cell, containing a heterologous nucleic acid as well as a method of introducing a nucleic acid molecule into the genome of an avian species, by contacting a population of isolated gonadal cells derived from a chick embryo with the nucleic acid molecule to yield transfected gonadal cells, and transferring the transfected gonadal cells to a
10 fertilized avian egg